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### THE PROTHETIC VOWEL IN GREEK

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[The so-called prothetic vowel in Greek finds its ultimate explanation in Indo-Hittite. In Indo-Hittite bases beginning with the first, third, or fourth laryngeal, the first syllable was retained everywhere if it was in the full grade. If it was in the reduced grade, it was lost everywhere except in Hittite, Greek, and Armenian. If the second consonant was w, the first three laryngeals could unite with it to form a long voiceless hw which appears as spiritus asper in Greek; this accounts for the Attic and Homeric alteration of  $\delta \nu \rho r$  and  $\dot{\epsilon} \delta \nu \rho r$ . If the initial syllable began with the second laryngeal (?) and was in the reduced grade, it was lost everywhere, but the laryngeal united with a following liquid or nasal to give the long voiceless  $\tilde{\lambda}$ ,  $\bar{\mu}$ ,  $\bar{\nu}$  which 'make position' in Homer.]

This paper will be concerned primarily with false prothesis, where the vowel in question is really a part of the root; true prothesis is rarer and more easily discerned. To arrive at any consistent rationale of this phenomenon it will be necessary to go back to Indo-Hittite bases for all words cited, Indo-Hittite being a prior state of Indo-European where the laryngeal consonants were phonemic and intact. It will be clear from section III why the laryngeals must be assumed in the etiology of Greek prothesis. The bibliography on the laryngeal hypothesis is by now fairly extensive,<sup>1</sup> and opinions on the subject have reached a certain degree of crystallization. The writer agrees in general with E. H. Sturtevant, whose views may be briefly summarized. There were four laryngeal consonants in Indo-Hittite, which were lost in Indo-European: (1) ', (2) :, (3) x, and

<sup>1</sup> Cf. particularly F. de Saussure, Mémoire sur le système primitif des voyelles dans les langues indo-européennes (Leipzig, 1879); H. Möller, Die semitisch-vorindogermanischen Laryngalen Konsonanten, Danske Videnskabernes Selskabs Skrifter 5.4.1-91 (1917); A. Cuny, Études indo-européennes I (Krakow, 1935); W. Couvreur, De Hettitische b (Leuven, 1937); and the recent articles by E. H. Sturtevant, Lang. 16.81-7, 179-82, 273-84 (1940).

The present article is a reworking of material included in my doctoral dissertation (Princeton University, 1938). I wish to thank Professors Harold H. Bender and Edgar H. Sturtevant for their many kindnesses. (4)  $\gamma$ . Their exact phonetic nature can perhaps not be defined at this time, but the first two were probably glottal stops, of palatal and velar color respectively, while the last two were doubtless spirants; the fourth alone was certainly voiced, while the others seem to have been voiceless.<sup>2</sup> The third and fourth appear in Hittite as h, the h corresponding to the third being written double when this was possible, but never the h corresponding to the fourth.<sup>3</sup> Before the laryngeals disappeared in Indo-European they had altered both the quantity and quality of adjacent vowels. They all lengthened preceding short vowels, which became the 'inherited long vowels' of conventional Indo-European comparative grammar. When antevocalic the laryngeals had no effect on vowel quantity, but the second and third changed a following (or preceding) e to a. The only long vowels in Indo-Hittite were lengthened grades. The Indo-European shwa primum ( $\vartheta$ ), then, is the result of the reduction of the original short e, that is, shwa secundum (b), plus a laryngeal. Whether there was a still further reduction, that is, a vocalization of the laryngeal per se, is problematical, but not at all impossible. Any initial vowel in Indo-European followed an initial laryngeal in Indo-Hittite.

### I. THE PROTHETIC VOWEL

The reasons for assuming that vocalic 'prothesis' in Greek was inherited are, in general, three. (1) Armenian agrees with Greek in this respect, *a*- being the Armenian 'prothetic vowel', though *e/i*- sometimes corresponds to Greek  $\dot{\epsilon}$ -; e.g. Skt.  $n\bar{a}ma$ , Lat.  $n\bar{o}men$ : Gk.  $\ddot{o}ro\mu a$ , Arm. *anun*; or Skt. rajas, Goth. rigis: Gk.  $\ddot{\epsilon}\rho\epsilon\beta os$ , Arm. *erek*. (2) Cognate words with the accent on the first syllable show the vowel; e.g.  $\ddot{\epsilon}\delta\omega$ : Skt. *admi*, Lat.  $ed\bar{o}$ , but  $\dot{o}\delta\omega\nu$ : Lat.  $d\bar{e}ns$ , etc. (3) Vedic reduplication with a long vowel indicates the presence of an original initial vowel which was lost in Sanskrit, but which remained as 'prothetic' in Greek, e.g.  $\dot{\epsilon}\gamma\epsilon i\rho\omega$ : Lat. *expergiscor* (< \**ex-per-griscor*), Skt. *gr*, but  $j\bar{a}gr$  and  $\dot{\epsilon}\gamma\rho\dot{\eta}\gamma\rho\rho a$ . The idea that the 'prothetic vowel' is in reality an inherited part of the root, ultimately due to an initial laryngeal syllable, is not new, having been advanced by nearly all the holders of the laryngeal hypothesis, of whom Benveniste has made the most recent statement:<sup>4</sup>

La 'prothèse vocalique' du grec et de l'arménien a donc, au moins en partie, un fondement étymologique: c'est la reste d'une initiale g-antéconsonantique.

But the phenomenon was first noticed by Möller, who claimed that an Indo-Semitic \**Aewén*, for example, resulted in an IE \**wén*, though the initial laryngeal syllable was sometimes retained, especially in Greek.<sup>5</sup> From the catalogue of

<sup>2</sup> J. A. Kerns and B. Schwartz in JAOS 60.181–92 (1940) argue that the second must have been a voiced velar spirant. This theory, however attractive from the standpoint of Gestalt, is not in accord with the facts (cf. sections II and III below).

<sup>3</sup> Cf. E. H. Sturtevant, Lang. 16.81-7.

<sup>4</sup> Origines de la formation des noms en indo-européen 152 (Paris, 1935).

<sup>5</sup> 'Der erste Vokal mit dem Spiritus lenis is zuweilen altertümlich (ursprünglich als Schwa-vokal, dann aber quantitativ mit dem ursprünglichen e zusammengefallen), besonders im Griechischen, noch erhalten' (Laryng, Kons. 9). words with 'prothesis' which follows it is perhaps possible to alter and expand Möller's supposition into a 'law', namely: In Indo-Hittite bases beginning with the first, third, or fourth laryngeal, the first syllable was retained everywhere if it was in the full grade. If the first syllable was in the reduced grade, it was lost everywhere except in Hittite, where it appears as a- or ha-, Greek, where it appears as  $\dot{a}$ -,  $\dot{\epsilon}$ -, or  $\dot{o}$ -, and Armenian, where it appears as a-, (e/i-). If the initial syllable began with the second laryngeal (i) and was in the reduced grade, it was lost everywhere, but the laryngeal united with a following liquid or nasal and made it long and voiceless.

The situation is perhaps not as clear-cut as one would like, for various contaminations, assimilatory and dissimilatory changes have played their role of havoc. Sturtevant has convinced me that  $\epsilon$  and o are contaminated shwas for the usual a; the same was probably true in Armenian, where we sometimes have e or i for the usual a. Also, there are very few certain cases of IH bases with initial fourth laryngeal, the prefix e-/o- (< IH  $\gamma e$ -) 'with, together, same' accounting for many words with seeming IH fourth laryngeal initial. On the whole, however, the outlines of this phonetic development are fairly well defined, as the following table shows. I posit IH bases in themes I and II. (A = laryngeal 1, 3, or 4; e = original vowel, C = consonant other than laryngeal.)

THEME I:  $A \acute{e} C(C)$ 

\*Aérw- 'red': Skt. arunas, Gk. ἕρευθος.

- \*'éd- 'eat': Lat. edō, Skt. admi, Gk. ἕδω, Hitt. etmi.
- \*'és- 'is': Skt. asti, Lat. est, Lith. esmi, Goth. ist, Gk. έστί, Hitt. eszi.
- \*xélk- 'defend': Goth. alhs 'temple', OE ealhian, Gk. ἀλκή.
- \*xéwy- 'bird': Lat. avis, Arm. hav.
- \*xéwg- 'increase': Lat. augeō, Skt. ojas, Goth. aukan, Gk. aὐξάνω.
- \*Aérg- 'reach, extend': Gk. ὄργυια.
- \*:énbh- 'cloud, mist': Skt. ambhas, Arm. amp, Gk. ἀφρόs.
- \*: élbh- 'white': Lat. albus, OHG elbiz 'swan', Gk. ἀλφόs 'white spot', Hitt. alpas 'cloud'.

THEME II: AbCé(C)

- \*Abréw-: Skt. rohitas, ravis 'sun', Lat. ruber, OE rēod, Arm. arev 'sun', Gk. ἐρυθρόs.
- \*'bdé-n- 'tooth': Lat. dēns (dent-), Skt. dan, Lith. dantìs, Goth. tunbus, Gk. όδών, Arm. atamn, Hitt. atanz 'eaten'.
- \*'osént- 'are': Skt. santi, Lat. sunt, Goth. sind, Hitt. asanzi, Gk. (Hom.) ἔασι, ἐών.
- \*xblék-: Skt. rakşati, Gk. ἀλέξω.
- \*xwéy-: Skt. vayas, veş, Gk. aletós.
- \*xъwég-: Skt. vakşayati,Goth. wahsjan, Gk. à(<sub>f</sub>)έξω.
- \*A brég-: Lat. regō, Gk.  $d\rho \epsilon \gamma \omega$ .
- \*?vnébh-: Skt. nabhas, Lat. nebula, OHG nebel, Hitt. nepis, Gk. νέφος, but Hom. δέ νέφος.
- \*: blébh-: Gk. λόφος 'crest, ridge', but Hom ὑπὸ λόφον.

The rest of this section is a catalog of the most important Greek words that exhibit 'prothesis' as an inherited part of the root. The second section will treat words that have spiritus asper alternating with 'prothesis'; the third will treat words of the last type listed above.

 $\dot{a}\gamma\epsilon\iota\rho\omega$  'gather, assemble' : Lith. gurgulē 'Menge' has  $\dot{a}$ - probably from n 'in'.  $\dot{a}\gamma\sigma\sigma\tau\sigma$ 's 'hand' : Skt. hastas, Lith. pažastis; the aspiration in Sanskrit is doubtless due to laryngeal x absorption (cf.  $\theta\nu\gamma\dot{a}\tau\eta\rho$  : duhitā); < \*xbgost-.

 $\dot{a}(f)\epsilon i\delta\omega$  'sing',  $\dot{a}oi\delta \delta s$ ,  $a\dot{v}\delta \eta$ ,  $\dot{a}\eta\delta\omega\nu$ : (possibly) Skt. vadati 'speaks', <\*xweud-(reduplication).

 $\dot{a}(f)\epsilon i\rho\omega$  'raise' : (possibly) Skt. varşma 'height', Lith. sverti 'weigh', < \*Awer-.

d(F)  $\xi \omega$  'increase' : Skt. vakşayati, Goth. wahsjan, Lat. auge $\bar{o}$ ,  $< *x_{b}weg$ .

 $\ddot{a}(f)\epsilon\theta\lambda$ os 'contest' : Goth. wadi, Skt. vadhati, < \*Awedh-.

άκούω 'hear' : Goth. hausjan, Hom. νηκουστέω 'disobey' with lengthened n as a result of initial laryngeal, < \*A bkew-.

 $d\lambda \epsilon \gamma \omega$  'am anxious' : Lat.  $d\bar{\imath}$ -ligo, ON lakr 'bad', < \*Ableg-; Theme I in  $d\lambda \gamma \sigma$ s,  $d\lambda \gamma \epsilon \omega$  : Lat. algeo, < \*Aelg-.

άλεισον 'drinking cup' : OHG līd 'cup' (Lith. lytùs 'rain'?), < \*Ableit-.

 $\dot{a}\lambda\epsilon i\tau\eta s$  'guilty' : OHG *leid*, Lith. *letéti* 'trouble', < \*Asleit- (A = a laryngeal different from the one in the preceding paragraph).

 $\dot{a}\lambda\dot{\epsilon}\xi\omega$  'defend, protect' : Skt. rakşati, < \*Aılek-; Theme I in  $\dot{a}\lambda\kappa\dot{\eta}$  : Goth. alhs.  $\dot{a}\lambda\dot{\iota}\nu\omega$  'anoint' : Skt. lināti, limpati;  $\dot{a}\lambda\dot{\epsilon}\dot{\iota}\phi\omega$  'anoint' probably by contamination of this and  $\lambda\dot{\iota}\pi\sigma\sigma$  (< \*?lip-), < \*Aılein-.

άλύω 'am beside myself', άλυσις 'inquietude' : Skt. roşati, < \*Ableus-.

άλωή 'garden' : Skt. lavas 'cutting', < \*AbleAw-; Att. άλωs has unexplained aspiration.

aλ ωπηξ 'fox' : Skt. lopacas, Arm. alues, < \*A bleA pek-.

åμάρα 'conduit' : (probably) Lat. mare, ON moerr 'sea' < \*Asmar.

àμαρτία 'mistake': Skt. mrşa 'wrongly', Lith. mi $\tilde{r}$ šti 'forget', < \*Asmert-; νημερτήs 'infallible' shows initial long n from laryngeal. On aspiration cf. äλωs above.

άμαρύσσω 'gleam' : Skt. marīciş, Lith. mirkanis 'glance', < \*Asmer-w-k-.

άμοιβή 'change' : Lat. migrāre, < \*Aьmeigw-.

 $\dot{a}\mu\dot{\epsilon}\lambda\gamma\omega$  'milk' : Lat. mulgeo, mulcto, OHG milchu, Lith. milžti, < \*Asmelg-.

 $\dot{a}\mu\epsilon\rho\gamma\omega$  'gather': Skt. mrjati, < \*Asmerg-; Vedic reduplication in māmrj, with  $\bar{a}$  confirming laryngeal;  $\dot{o}\mu\delta\rho\gamma\nu\nu\mu\iota$  has  $\dot{o}$ - by assimilation.

ἀμεύσασθαι 'move' : Lat. moveō, Lith. máuti, < \*Abmew-.

ἀνήρ 'man' : Skt. nara, Lat. Nerō, < \*Abner-.

άστήρ 'star' : Lat. stella, NE star, Arm. ast<br/>t, is probably a Semitic loanword, cf. Ishtar.

 $d\bar{v}\tau\epsilon\omega$  'call' : Lat.  $i\bar{u}bilum$ , < \*AbyuA-; onomatopoetic.

čāσι (Hom.) 'they are' : Att. είσί, Lat. sunt, Skt. santi, Hitt. asanzi, < \*'osnti.

<sup>6</sup> The usual explanation (cf. Buck, Comp. Gr. of Gk. and Lat. 246) is that  $\check{\epsilon}a\sigma\iota$  is after  $\tau\iota\theta\check{\epsilon}a\sigma\iota$ ; rather, the two words have a similar origin, shwa + consonant +  $a\nu\tau\iota$ .

 $\epsilon_{\gamma\epsilon\iota\rho\omega}$  'awaken': Lat. expergīscor, Skt. jāgarti, with long vowel in reduplication due to a laryngeal, < \*A the set of the

 $\dot{\epsilon}(F)\epsilon i\delta o\mu a\iota$  (Hom.) 'seem' : Lat. videor, olda, Skt. veda; lack of aspiration would indicate fourth laryngeal initially (cf. next section). Root \* $\gamma bweid$ -.

 $\dot{\epsilon}\theta\dot{\epsilon}\lambda\omega$  'wish' : OCS želėti, Hes.  $\phi\alpha\lambda\dot{\epsilon}\epsilon\iota$ . Sapir has noted (unpublished) the Toch. B cognate yšelme with y- from 'e-. Root \*'sghwel-.

 $\epsilon \lambda \delta \tau \eta$  'pine' : Skt. lata, OHG linta, < \*Ablent-; the Greek word is probably from Theme I, \*Aelnt-.

čλaφos 'hind' : Goth. lamb, < \*Aslembh-; the Greek word may be from Theme I, cf. above.

¿λaχύs 'quick' : Skt. laghuş/raghuş, OHG lungar, \*Asle(n)ghw-, cf. above.

 $i\lambda i\gamma \chi \omega$  'accuse, reproach': Skt. langhati, Hitt. lenkais 'oath', < \*:slengh-, with : because of lack of initial vowel in Hittite. The Greek word is doubtless in Theme I with contaminated vowels.

έλούθω· ἕρχομαι (Hes.) : (possibly) Skt. rodhati, Goth. liudan, and possibly also to έλεύθερος, Lat. liber, < \*A bleudh.

ἐμός, ἐμέ 'my' : Skt. mam, maya, etc., Hitt. amuk, < \*'ъme-.

 $e^{i}$ νεγκεiν 'draw, carry' : Skt. naśati, aśnoti, Lat. nancīscor, Lith. nešti, Hitt. nenk-, nenenk- 'rise, raise', < \*'snek-, but cf. ἀνάγκη above.

έννέα 'nine' : Skt. nava, Lat. novem, Goth. niun, Arm. inn, < \*' snewn.

έράω 'love' : (probably) Skt. ramate 'is in repose', aris 'desiring', < \*A br-.

έρεβοs 'darkness' : Skt. rajas, Goth. riqiz, Arm. erek, < \*Abregw-.

έρείδω 'support' : Lat.  $r\bar{i}dica$ , < \*A breid-.

έρείκω 'break' : Skt. rikhati, Lith. riẽkti, < \*Abreik-.

έρείπω 'dash, tear down' : Lat.  $r\bar{i}pa$ , ON  $r\bar{i}fa$ , < \*Abreip-.

έρέπτομαι 'snatch, eat' : Lat. rapiō, Skt. rapas, < \*Abrep-.

ἐρέσσω, ἐρέτης 'row(er)' : Lat. rēmus, OE rōwan, Skt. aritras (Theme I), < \*A pret-.

èρεύγομαι 'eructate' : Lat. ē-rugō, ructō, Lith. raũgti, Arm. orcam, < \*Abreug-.
 èρεφω 'cover' and ὄροφος 'reed (as roofing)' : OHG hirni-reba 'crane', NE roof,
 < \*Abreph-.
</p>

 $\epsilon \rho \epsilon \chi \theta \omega$  'tear, break' : Skt. raksas 'torment', < \*Abrekhth-.

 $\epsilon \rho \epsilon \omega$  'question' : ON raun 'essay', < \*A brew-.

έρυγόντα 'bellowing': Lat. rugiō, < \*A breug-; in the form βύζω 'growl' the laryngeal has coalesced with the  $\rho$ .

έρυσίχθων 'earth-shaker' : Lat.  $ru\bar{o}$ ,  $\bar{e}$ - $ru\bar{o}$ , < A breu-t-;  $\dot{\rho}$ υτόs 'shaken' has the same explanation as  $\dot{\rho}$ ύζω.

öβριμοs 'mighty': βρίμη probably has e/o (<  $\gamma e/\gamma o$ -) prefix, or else it is from a root doublet.

όδών 'tooth' : Skt. dan, Lat. dēns, Lith. dantis, Goth. tunbus, Arm. atamn; Theme I in  $\tilde{\epsilon}\delta\omega$  : Hitt. etmi, etc.; root \*'sde-n-.

όλιβρόν (Hes.) 'smooth' : OHG slīfan, NE slip,  $< A_b(s)$ leib-.

 $\delta\lambda$ ίγος 'little' probably has prefixed δ- if related to  $\lambda$ οιγός 'misfortune', Lith. ligà 'malady'.

όλισθάνω 'slip' : Lith. slýsti, NE sled,  $< *A_{\mathfrak{b}}(s)$ leidh-.

όλοφύρομαι 'cry' : Arm. olb 'plaint', < \*Ablebh-.

 $\delta\mu i\chi\lambda\eta$  'mist' : Skt. meghas, Lith. miglà,  $< *A \circ meigh$ -; also  $\delta\mu i\chi\epsilon i\nu$  'urinare'; Arm. mēg and mēz do not prove lack of inherited initial syllable, since they are Persian borrowings.

όνειδος 'reproach': Goth. naiteins, Skt. nīda 'affront', Arm. anicanem, < \*Asnei-d-.

όνομα 'name' : Skt. nāma, Lat. nōmen, Arm. anun, < \*AьneAmn; the Greek word, however, is in Theme I with o-grade in the first syllable.

öνομαι 'injure, blame': Lat. nota 'sign, stigma' is probably a pejorative specialization of the root in ὄνομα.

örvξ 'nail' : Skt. nakhas, Lith. nãgas, OE naegel, Lat. unguis (Theme I), < \*Asnekhw-.

 $\delta\pi\tau\deltas$  'cooked' has probably prefixed  $\delta$ - to the base in  $\pi\epsilon\sigma\sigma\omega$  'cook'.

 $\delta \pi \nu i \omega$  'take for wife' is probably a word of foreign origin, cf. Etr. *puia-c* 'and wife'.

όρέγω 'reach, extend' : Lat. regō, por-rigō, Skt. rajiṣṭhas, Goth. uf-rakjan, < \*A breg-; Theme I is seen in ὄργυια 'fathom' < \*A erg-.

 $\delta\rho\epsilon\chi\theta\epsilon\omega$  'beat fast' < \*A breghdh-; the doublet  $\dot{\rho}o\chi\theta\epsilon\omega$ , with laryngeal assimilation in the  $\rho$ -, is from \*Areghdh-.

όρτνω 'rise' : Skt. riņati 'causes to flow', Lat. rīvus, < \*A brei-; Theme I in δρνυμι, orior, < \*Aer-.

όρύσσω 'dig', ὄρυξ, ὄρυγμα : Lat. rūga 'wrinkle', Lith. raũkas, < \*Abreug-.

ὄτλος, 'Ατλας : τλήναι, τελαμών, is from \*Ao-teleA-.

This list of words is not complete, but there is no particular advantage in making it so. Nor has a full citation of etyma and references been given, as these can easily be found in the usual etymological dictionaries. Further, many compounds, particularly those with the prefixes  $\dot{o}$ - and  $\dot{a}$ - (<  $\gamma o$ - and sm-) 'together, same' such as  $\ddot{o}\pi a\tau\rho os$  'of the same father',  $\ddot{o}\zeta v\gamma \epsilon s$  (Hes.) 'yoked together',  $\dot{o}\kappa \epsilon \lambda \lambda \omega$  alternating with  $\kappa \epsilon \lambda \lambda \omega$  'ground',  $\ddot{o}\zeta os$  'companion' (from \* $\dot{o}o\zeta os$ ),  $\dot{a}\delta\epsilon\lambda\phi \phi s$  ('of the same womb') 'brother', etc., have necessarily been omitted.

## II. 'PROTHESIS' ALTERNATING WITH SPIRITUS ASPER

There are two reasons for this separate heading: (1) we are to deal with a phenomenon which, unlike the preceding, apparently manifests itself differently in different dialects, and (2) a newly discovered IE phoneme is involved.<sup>7</sup> When confronted with such pairs as  $\check{a}\eta\mu\iota/a\check{l}\nu\omega$ ,  $\dot{\epsilon}\epsilon\rho\sigma\eta/\check{\epsilon}\rho\sigma\eta$ ,  $\dot{a}o\lambda\lambda\eta s/\dot{a}\lambda\eta s$ , and their respective cognates, Lat. ventus, Skt. varşan, Lith. veliù, it is at once apparent that more than a simple initial w- is involved. Otherwise, why the alternative forms with 'prothesis', and why the rough breathing, since simple IE initial w- is totally lost in Greek (cf. tor : Lat. viola,  $\dot{\epsilon}\mu\dot{\epsilon}\omega$  : Lat. vomō)? When Hittite cognates are noted, e.g. hwantas 'wind' for the first pair mentioned above, it

<sup>&</sup>lt;sup>7</sup> Edward Sapir has treated the subject in his article Glottalized Continuants in Navaho, Nootka, and Kwakiutl (with a note on Indo-European), Lang. 14.248-74 (1938). The present investigation, however, was quite independent of Sapir's.

becomes clear that an IH initial laryngeal is involved. We must then understand  $\ddot{a}\eta\mu\iota$  as coming from an IH base \*xweA-, and  $a\imath\nu\omega$  (< \*hwənyō) as coming from an IH base \*xwe-. Since the laryngeals were lost early in IE,<sup>8</sup> and since a w in conjunction with a laryngeal in IH is represented as a phoneme distinct from the simple w in both Greek and Germanic,<sup>9</sup> we must understand that IE had a long, voiceless phoneme hw (in distinction to the voiced simple w) which was the result of the conjunction of any one of the first three (voiceless) laryngeals and a w in IH or early IE. The same is true of y also, but that is outside the scope of this study since apparently no 'prothesis' is involved. Presumably the fourth (voiced) laryngeal ( $\gamma$ ) did not enter into this union, and there is no clear proof that it did.<sup>10</sup> This development, as far as Greek is concerned, can be summarized in the following table:

$\mathbf{IH}$	* $x \acute{e} w A$ - 'blow'	*xьwéA-	*xwьA∸
IE	*au-	*əwē-	*hwə-
Gk.	aŭpa	ἄημι	αίνω
Cog.	Lat. aura 'breeze'		Hitt. hwantas 'wind', Lat. ventus
$\mathbf{IH}$	*:éw(s)- 'see, light'		* <b>:</b> wé(s)-p-
$\mathbf{IE}$	au(s)-		*hwe(s)-p-
Gk.	aὔριον Hom. ἤωs < *a <sub>F</sub> σωs		ἕσπεροs
Cog.	Lat. aurōra, Hitt. auszi 'sees'		Lat. vesper
$\mathbf{IH}$	*Aéwrg- 'shut in'	*Аъwérg-	*Awerg∸
$\mathbf{IE}$	*eurg-	*əwerg-	*hwerg-
Gk.		<b>ε</b> ἵργω < *ε <i>ϝ</i> εργω	ἕρξas
Cog.	Lat. <i>urge</i> ō		Skt. vrajas

In general, it is to be noted that forms with 'prothesis' are associated with Homer or the dialect(s) underlying Homer, while forms with spiritus asper are associated with Attic, though this is not always true. The form  $\epsilon i \rho \gamma \omega <$ \* $\epsilon_f \epsilon \rho \gamma \omega$ , for instance, is certainly Attic. As we have noted before, mutual contaminations have affected different forms from the same root; thus  $\epsilon i \rho \gamma \omega$  and  $\epsilon \rho \xi \alpha s$  (Plato, Politicus 285B) are normal for their respective ablaut grades, while  $\epsilon \rho \gamma \omega$  represents a contamination of the latter type with the former. On the whole, all that can be said is that Attic 'prefers' the forms with rough breathing. The following is a catalog of such words compiled largely from Sommer,<sup>11</sup> though his treatment of them, without benefit of the laryngeal hypothesis, is extremely specious and ad hoc.

<sup>8</sup> There is no space here to go into the proof. Suffice it to say that no laryngeals survive per se in any IE language, and that their disappearance leaves exactly the same results in all the IE languages.

<sup>9</sup> The existence of this phoneme in Germanic was discovered by H. L. Smith Jr. See his article, The Verschärfung in Germanic, below.

<sup>10</sup> Cf. Sturtevant, Lang. 16.85, fn. 3.

<sup>11</sup> Griechische Lautstudien 83-136.

äημι 'blow', ἀήρ 'atmosphere', ἄεμμα, ἄελλα, Aeol. αὕελλα 'stormy wind'; without 'prothesis' but with spiritus asper in αἴνω 'scatter by the wind' alternating with ἀνέω (< \*a<sub>f</sub>aνεω). The third laryngeal initial is evidenced by Hitt. hwantas : Skt. vāti, OCS vějati, Goth. waian 'blow', Lat. ventus, vannus, NE wind, winnow, in Theme I with r-extension in aὕρα, Lat. aura. Benveniste<sup>12</sup> connects the above, and probably rightly, with Hitt. huwai- 'run, flee' : ἰεμαι (< \*hwei-) 'rush, hasten', and also alετόs, Lat. avis 'bird'.

àλίσκομαι 'am taken', Arc.  $_{faλoντes}$ , Lac.  $ηλωτeus (< *ε_{feλωτeus})$ : (possibly) Goth. wilwan 'pillage'.  $_{alp\omega}$  'take' would belong here if there were any evidence for digamma (cf. Boisacq), as well as  $\dot{a}\epsilon i \rho \omega$  'lift'. Root probably \*xwel-, certainly so if Hitt. hullas- 'be defeated' belongs here.

čaρόν (Hes.) 'bath' : Umbr. vesticatu 'libato', OHG wasal 'wetness, rain', < \*Awes-.

έδνον, Hom. čeδνa 'bridal gift', έδνόω, έδνωτής, έεδνώω, έεδνωτής 'betroth(er)' : OE weotuma 'bridal price', < \*A wed-/\*Awed-. It would be attractive to connect Skt. vadhūş 'bride', NE wed, and Hitt. hwitt- 'lead', but in both cases different final consonants are involved.

είκοσι, Hom. ἐείκοσι 'twenty'. Sommer 108 notes a Theran HIKA $\Delta$ I. We can perhaps expect analogical influences from other numerals; but if not, the root is \**Awei-kmta*.

 $\epsilon$ ίλω, είλέω 'roll, twist up', pass. 'rolled together, thronged'; aor. inf. ἕλσαι, Hom. ἑέλσαι, Ion. ἀλής, Hom. ἀολλής 'rolled together, thronged', ἡλίαια 'popular tribunal', probably also ἄλις 'in a crowd, enough' if not from a root \*swel-. The root is \*xswel-/\*xwel- in view of the Hittite cognates hulaliya- 'wrap, wind', hulali 'distaff'.<sup>13</sup> Hitt. hulla- 'smite, destroy' probably belongs here too (certainly not to ὅλλυμι as Couvreur thinks<sup>14</sup>), for one of the meanings of Hom. είλω is 'drive along, smite', cf. νῆα κεραννῷ ἕλσας. Probably ἕλιξ 'spiral', ἐλίσσω, Ion.-Att. είλίσσω (< \*ε<sub>f</sub>ελισσω) 'roll', and ἕλμις 'worm' also belong here.

είλύω 'cover, enclose', ἐελμένος, ἐλυσθείς (A47, Zenodotos), o-grade in οὐρανός : Skt. vrņoti 'cover', < \*Aswe-l/r-, \*Awe-l/r-.

είρω, ἐρέω, ῥητόs 'say', Argive ἀ<sub>f</sub>ρητευε 'says',<sup>15</sup> εὐείρω (Hes.) : Skt. vratam 'command', Lat. verbum, Goth. waurd, Hitt. hwrta- 'curse', < \*x wer-/\*xwer-.

čκηλos alternating with εὕκηλos 'quiet' : Skt. okas 'agreement, rest', Lith. úkis 'rural property', < \*Aeuk-/\*Awek-.

 $\epsilon \kappa \omega \nu$  'willing' : Skt. vaśmi 'I wish', Hitt. wekzi 'asks, desires', < \*'wek-, though no forms with 'prothesis' can be cited.

čλδομαι, Hom. čέλδομαι, čλδωρ, čέλδωρ 'wish, desire' : Skt. vr- 'choose', Lat. volo, voluptas, Lith.  $v\tilde{e}lyti$ , NE will,  $<^*\gamma weld$ -/\* $\gamma weld$ -, with fourth laryngeal inferred from the consistent lack of aspiration.

čλπομαι, Hom.  $\dot{\epsilon}\lambda$ πομαι 'hope, expect'. The spiritus asper is seen in the inscriptional HEΛΠΙΔ' and AΦΕΛΠΙΖΕΙ,<sup>16</sup> though these may be analogical and the root related to the preceding with a -p- extension.

<sup>&</sup>lt;sup>12</sup> Origines 155.

<sup>&</sup>lt;sup>13</sup> Cf. Sturtevant. A Hittite Glossary<sup>2</sup> s.v.

<sup>&</sup>lt;sup>14</sup> De Hettitische *h* 14, 24 f.

<sup>&</sup>lt;sup>15</sup> Cf. F. Solmsen, Untersuchungen zur griechischen Laut- und Verslehre 236.

<sup>&</sup>lt;sup>16</sup> Cf. K. Brugmann, IF 16.492, and F. Sommer, Griechische Lautstudien 107-8.

 $\epsilon i \lambda \eta$ ,  $\epsilon i \lambda \eta$ ,  $\epsilon i \lambda \eta$  'gleam of the sun' < \*A *wel-/\*A wel-*.

čννυμι 'wear', είμα, ἰμάτιον 'garment', ἐανόs 'fit for wearing, fine' : Lat. vestis, Goth. wasti, NE wear, Hitt. wassi-, < \*:wes-. Theme I (\*:au-) is seen in Lat. induō, exuō 'put on, off', and in Lith. aviù 'wear footgear'.

έργω, Hom. ἐέργω, Att. εἴργω 'shut in, enclose': Skt. vrajas 'enclosure', Lat. urgeō (Theme I), Goth. wrikan 'press on, torment', < \*A werg-/\*Awerg-. A form \*ἕργω must be posited to account for such forms as ἄφερκτος (Aeschylus, Septem 445) and ἕρξας (Plato, Politicus 285B), though εἴργω ( $< *\epsilon_{F}\epsilon_{F}\epsilon_{F}\gamma_{\omega}$ ) with 'prothesis' instead of aspiration was dominant and influenced ἕργω. The latter, however, may be analogical to ἕργω 'work' with smooth initial w-.

έρση, Hom. ἐέρση 'dew' : Skt. varşati 'it rains', < \*Abwers-/\*Awers-.

čσπεροs 'evening' : Lat. vesper, Att. čωs 'dawn'; Theme I appears in Hom. ňωs  $(< *a_{f}\sigma\omega s)$ , Aeol. aŭωs, aŭρων 'morning', Lat. aurōra, Lith. aušrà, Hitt. auszi 'he sees'. Root \*:au(s)-, \*:we(s)-.

 $\epsilon \sigma \tau ta$  'dwelling, foyer' : Lat. Vesta, Goth. wists 'abode', Hitt. hwes- 'live', hwesas 'alive, raw', < \*xwes-.

isos, Hom. isos, and the occasional isos indicate the presence of the phoneme hw initially, though the etymological connections are uncertain (cf. Boisacq).

ώρακιάω 'faint', ώρος 'sleep', Sapph. ἄωρος : OE wērig, < \*A wer-k-/\*Awer-k-.

There are, of course, other words that once had an initial laryngeal before w, but these either do not occur with the zero grade of the first syllable which would result in aspiration (as  $\dot{a}\epsilon i\delta\omega/a\dot{c}\delta\dot{\eta}$ ), or else, by Grassmann's law, they are unable to show aspiration (as  $\ddot{a}\epsilon\theta\lambda\sigma\nu/\dot{a}\theta\lambda\sigma\nu$ ).

### III. LARYNGEAL REFLEXES IN HOMER

This section is so entitled because the phenomenon involved is specifically Homeric, though it also manifests itself elsewhere. As we have noted above, there is a class of words that should show 'prothesis' in Greek, but do not; and we have tentatively ascribed this anomaly to the presence of the fourth laryngeal in initial position. That is, after the proportion  $auge\bar{o}$ :  $a\dot{v}\xi\dot{a}\nu\omega = vak\bar{s}ayati$ :  $\dot{a}_{f}\epsilon\dot{\xi}\omega$  we should expect a similar proportion ambhas :  $\dot{a}\phi\rho\delta s = nabhas$  :  $\dot{\epsilon}\dot{a}\nu\epsilon\phi\sigma s$ . But \* $\dot{a}\nu\epsilon\phi\sigma\sigma$  does not exist; instead we have  $\bar{\nu}\epsilon\phi\sigma\sigma$  with a long initial  $\nu$ , at least one that 'makes position' in Homer. Similarly we have  $\lambda a \pi a \rho \delta s$  'slack, soft',  $\lambda a \pi a \rho a$  'soft part of the body',  $\lambda a \pi a \zeta \omega$  'weaken, ravage' : Skt. alpas, Lith. alpnas 'little, weak';  $\alpha \lambda \alpha \pi \dot{\alpha} \zeta \omega$  'empty, make poor' is either from a different root with initial x instead of : or else it is in Theme I. The long voiceless  $\lambda$  is seen also in λίπος 'fat', λιπαρός 'anointed, sleek' : Skt. limpati 'anoints'; ἀλείφω 'anoint' is a root doublet. λόφοs 'crest, tuft, ridge' : ἀλφόs 'white spot', Celt. Alpēs 'white mountains', Lat. albus, OHG elbiz 'swan', Hitt. alpas 'cloud'. A long voiceless  $\mu$ is seen in µalakós 'soft' : Lat. molo, Hitt. malai 'make soft, grind'. All of these words, as well as a few more,<sup>17</sup> make position, hitherto inexplicably, in Homer. Some examples follow.

<sup>17</sup> A complete catalog can be found in La Roche, Homerische Untersuchungen 49 ff. There are a few exceptions in stereotyped phrases such as  $\chi\rho\nu\sigma\epsilon_{0}\sigma\bar{\nu}$  itéqecour (N 525) and  $\delta\epsilon\mu\nu\delta\nu$   $\delta\epsilon$   $\lambda\delta\phi\rho\nu$  (A 40). Máoruξ, with no sure etymology, probably belongs here, and  $\mu\epsilon\gamma$ as also makes position, though there is no other evidence for an initial laryngeal. (This word may have had  $\sigma$ -movable after  $\sigma\mu\mu\kappa\rho\delta\nu$ ).

In view of the fact that what cognates we have in Theme I for the above words show initial a-, and in particular Hitt. alpas 'cloud' :  $i\lambda\phi\phi$ s 'white spot', where the initial a- instead of ha- indicates the second laryngeal, I have assumed that all of these words have initial  $\bar{\lambda}$ ,  $\bar{\mu}$ ,  $\bar{\nu}$  (hl, hm, hn) as a result of i + l, m, n. There is no reason why the other two voiceless laryngeals ' and x should not have caused this phenomenon also, as was the case with w and y; I simply know of no examples to prove it. Sturtevant<sup>18</sup> has called my attention to the actual spellings  $\lambda h$ ,  $\mu h$ , etc. for the long, voiceless liquids and nasals in dialectal inscriptions, though generally they result from a lost initial  $\sigma$ . Finally, this phenomenon must be of Indo-Hittite origin, though Greek is the only language I know of that gives anything in the nature of proof. Hitt. *nepes* and *malai* once had an initial i, and the n, m in these words may have been long and voiceless too, but there is nothing in the writing of them to indicate it. At any rate, it is gratifying to have the last major problem in Homeric versification solved by the laryngeal hypothesis.

<sup>18</sup> Cf. The Pronunciation of Greek and Latin<sup>2</sup> 63-4 (Linguistic Society, 1940).